

COMMONWEALTH MYCOLOGICAL
INSTITUTE
LIBRARY

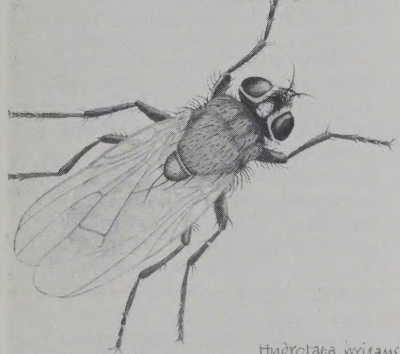
24 JUL 1985

28/A

SPAN 

VOL 27 NO 1 1984

Progress in agriculture
Le progrès en agriculture
Fortschritt in der Landwirtschaft
Avances en la agricultura



Hydrotaea irritans
Fallen ♀

SPAN 

VOL 27 NO 2 1984

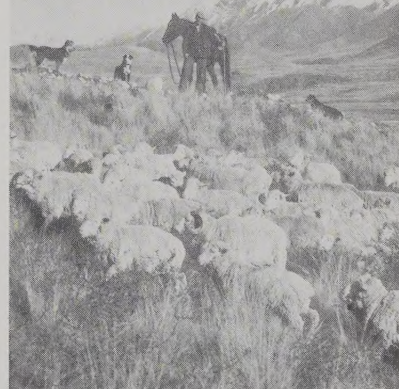
Progress in agriculture
Le progrès en agriculture
Fortschritt in der Landwirtschaft
Avances en la agricultura



SPAN 

VOL 27 NO 3 1984

Progress in agriculture
Le progrès en agriculture
Fortschritt in der Landwirtschaft
Avances en la agricultura



Author

- | | |
|--------------------------|----------------------------|
| Allen, G.P. 7 | Leclercq, P. 61 |
| Blackwell, J. 11 | Lewis, E.J. 21 |
| Breese, E.L. 21 | Livingstone, R.M. 108 |
| Britton, D.K. 9 | Luckwill, L.C. 66 |
| Campion, D.G. 100 | McVeigh, E.M. 100 |
| Carver, M.F. 64 | Martens, M. 68 |
| Caygill, J.C. 80 | Matthewman, R.W. 20 |
| Cherry, M. 46, 122 | Mowat, G.N. 49 |
| Clements, R.O. 77 | Nash, R.J. 64 |
| Cousins, L.T.V. 135 | Pitts, E. 2 |
| Dale, P.J. 55 | Plumb, H. 98 |
| Davies, W.E. 129 | Price, R.N. 30 |
| Disney, J.G. 35 | Richter, J. 19, 111 |
| English, S.D. 11 | Robertson, A. 32 |
| Fowler, V.R. 108 | Ryder, M.L. 105 |
| Gilbert, A.J. 16 | Saleem, M.T. 112 |
| Goodwin, R.F.W. 52 | Sellers, R.F. 49 |
| Hadler, M.R. 74 | Shorrocks, V.M. 119 |
| Hardon, J.J. 59 | Smith, A.J. 27 |
| Harvey, D.R. 99 | Spedding, C.R.W. 116 |
| House, L.R. 132 | Spencer, G.S.G. 24 |
| Hudson, J.P. 114 | Swaminathan, M.S. 4 |
| Huisman, E.A. 71 | Vind, R. 126 |
| Johnston, J.R. 112 | Walker, A.R. 102 |
| Jollans, J.L. 124 | Woodford, E.K. 58 |
| Latimer, H. 53 | |

Subject

A-chloralose, . . . 75 (fig.)
 Acaricide, . . . 104 (fig.)
Aegilops caudata, . . . 64
 Africa, agricultural conference report, . . . 58
 draught animals, . . . 27 (fig.), 28 (fig.), 29
 fish consumption, . . . 36
 foot-and-mouth disease, . . . 49 (fig.), 50
 (fig.), 51
 international aid, . . . 1
 oil palm improvement, . . . 59, 60
 pastoral development projects, . . . 20
 rinderpest, . . . 29
 sugar beet production, . . . 70 (fig.)
 Agriculture, aid to developing
 countries, . . . 1
 energy use in, . . . 116, 117 (figs.), 118 (fig.)
 human health and, . . . 124, 125 (figs.)
 investment, . . . 1, 46, 47, 48
 Agricultural research, EEC, . . . 122 (figs.),
 123
 international handbook on, . . . 116
 tropics, . . . 20
 UK, . . . 110
Agriotes spp., . . . 77
Agrobacterium tumefaciens, . . . 57
 Agroforestry, . . . 32, 33 (figs.), 34 (figs.)
Agrotis spp., . . . 77, 137
 Alsike, . . . 129 (fig.)
Alternaria alternata, . . . 137
Amblyomma sp., . . . 102, 103 (fig.)
 America, sugar beet production, . . . 70 (fig.)
 Amitraz, . . . 104
 Anabolic steroids, . . . 24 (fig.)
 Anaplasmosis, . . . 103, 104
 Animal breeding, cattle, . . . 104
 draught animals, . . . 28
 grass carp, . . . 72, 73
 growth promotion and, . . . 26
 sheep, . . . 106 (fig.), 107
 Animal feedstuffs, fish meal, . . . 35, 36
 pig nutrition and, . . . 108, 109 (figs.),
 110 (fig.)
 straw, . . . 127, 128 (fig.)
 sugar beet waste, . . . 70
 willow, . . . 34
 winged bean, . . . 80
 Animal health, African swine fever, . . . 123
 Aujeszky's disease, . . . 52
 draught animals, . . . 29
 East Coast Fever, . . . 128
 Enzootic Bovine Leucosis, . . . 123
 EEC research, . . . 122, 123
 flies and, . . . 30 (figs.), 31, 32
 foot-and-mouth disease, . . . 49 (fig.),
 50 (fig.), 51 (fig.)
 herpes, . . . 123
 rinderpest, . . . 29
 rodents and, . . . 74
 ticks and, . . . 102, 103 (figs.), 104 (fig.)
 Animal nutrition, draught animals, . . . 27, 28,
 29
 growth promotion and, . . . 25
 pig, . . . 108, 109 (figs.), 110 (fig.)
 sheep, . . . 106
 Animal wastes, use of, . . . 122, 123
 Animal welfare, . . . 109, 110, 123
 Antibiotics, growth promotion in livestock
 and, . . . 24
 Anticoagulant rodenticides, . . . 75 (figs.), 76
 Aphid, . . . 69, 123, 137
 Apple production, boron deficiency
 and, . . . 121 (fig.)
 improvement, . . . 66, 67 (figs.), 68
 irrigation, . . . 12 (fig.)
 pest control, . . . 66, 123
 successful cropping, . . . 114 (fig.), 115
 Aquaculture, . . . 72, 73
 Aquatic weed control, . . . 71 (figs.),
 72 (figs.), 73 (figs.)
Argasidae, . . . 103
 Argentina, tobacco production, . . . 136 (fig.)

Argyrotaenia velutinana, . . . 101
 Armyworm, . . . 100
 Arsenic salt solution, tick control, . . . 104
 Asia, draught animals, . . . 27, 28, 29
 foot-and-mouth disease, . . . 49, 51
 international aid, . . . 1
 rice production, . . . 4, 5 (figs.), 6 (figs.)
 sugar beet production, . . . 70 (fig.)
 Asian Vegetable Research and Development
 Centre (AVRDC), . . . 26, 115, 116
 Aujeszky's disease, . . . 52, 123
 Australia, dairy products and margarine
 consumption, . . . 2 (figs.)
 drip irrigation, . . . 11, 12 (figs.), 13 (fig.)
 micronutrient deficiencies, . . . 119, 120,
 121
 sheep production, . . . 106 (fig.), 107
 Austria, milk production quotas, . . . 2

b

Babesia spp., . . . 103, 104
 Babesiosis, . . . 102, 103, 104
Bacillus thuringiensis, . . . 18
 Bacteria, gene transfer technology and, . . . 26
 Banana production, developing
 countries, . . . 53 (fig.), 54, 55
 micronutrient deficiency, . . . 119 (fig.)
 Bandicoot rat, . . . 74 (fig.)
Bandicota bengaliensis, . . . 74 (fig.)
 Barbados, tourism and
 agriculture, . . . 53 (fig.), 54, 55
 Barley, energy use in production, . . . 118
 harvesting, . . . 126 (fig.)
 hybrids, . . . 64, 65
 micronutrient deficiency, . . . 119 (fig.)
 pig feed, . . . 109 (fig.)
 Beef production, carcass
 classification, . . . 122 (fig.), 123
 energy use, . . . 116, 117 (fig.), 118
 EEC milk quotas and, . . . 99
 Beet, pig feed, . . . 109 (fig.)
 Belgium, dairy products and margarine
 consumption, . . . 2 (figs.)
 foot-and-mouth disease, . . . 49
Bemisia sp., . . . 18
 Bilharziasis, . . . 17, 71, 73, 125
 Biological pest control, . . . 16, 18, 66, 79,
 100 (figs.), 101 (figs.), 102, 122, 123, 132
Biomphalaria alexandrina, . . . 73
 Blow fly, . . . 30, 35, 36
 Blue tongue, . . . 30
 Bollworm, . . . 102
 Book reviews
Adoption, Spread and Production Impact of
Modern Rice Varieties in Asia, by Herdt
 and Capule, . . . 83
Agrochemicals Handbook, the, ed. Hartley
 and Kidd, . . . 84
Energy Analysis and Agriculture; and
Application to US Corn Production, by
 Smil, Nachman and Long, . . . 84
English Farm, the, by Whitlock, . . . 82
Evaluating Technology for New Farming
System:: Case Studies from Philippine
Rice Farms, by Barlow, Jayasuriya and
 Price, . . . 83
Faba Bean (Vicia faba L.), the. A Basis for
Improvement, ed. Hebblethwaite, . . . 82
Field Problems of Tropical Rice, by Muller,
 revised Hargrove, Pollard and
 Tout, . . . 83
Food and Farm Policies of the European
Community, the, by Harris, Swinbank
 and Wilkinson, . . . 82

Fruit Tree Crop Production in the Caribbean
Region, by Weir, Weir and Tai, . . . 83
AISTORY OF Hereford Cattle and their
Breeders,
 a, by Heath-Agnew, . . . 82
Impact of Pest Management on Bees and
Pollination, the, by Crane and
 Walker, . . . 84
Oilseed Crops, by Weiss, . . . 83
Pest and Disease Control Handbook (2nd
edition), ed. Scopes and Ledieu, . . . 84
Pesticide Manual, the: a World Compendium
(7th edition), ed. Worthing and
 Walker, . . . 84
Pests, Diseases and Disorders of Sugar Beet,
 by Broom's Barn Experimental Station
 and Deleplanque & Cie, . . . 83
Research Highlights for 1982, by
 International Rice Research
 Institute, . . . 83
Sheep and Man, by Ryder, . . . 82
Technical Handbook for the Paddy Rice
Postharvest Industry in Developing
Countries, by Wimberly, . . . 83
Boophilus sp., . . . 102, 103, 104
 Boron, soil deficiency and
 correction, . . . 119 (figs.), 120 (fig.),
 121 (fig.)
Bos spp., . . . 104 (fig.)
Botrytis cinerea, . . . 62
 Brazil, draught animals, . . . 29
 micronutrient deficiencies, . . . 119, 120
 rubber plant collecting, . . . 7, 8 (fig.)
 tobacco production, . . . 135, 136 (fig.)
 Brewing waste, pig feed, . . . 109 (fig.), 110
 Brodifacoum, . . . 75 (figs.), 76
 Bromadiolone, . . . 75 (figs.)
 Bromethaline, . . . 75 (fig.), 76
 Brown plant hopper, . . . 4
 Brown spot, tobacco, . . . 137
 Brucellosis, . . . 125
 Bubonic plague, . . . 74
 Budworm, . . . 137
 Buffalo, . . . 27 (fig.), 28
Bulinus truncatus, . . . 73
 Butter consumption, . . . 2 (fig.), 3

C

Cabbage, pig feed, . . . 109 (fig.)
 Calciferol, . . . 75 (fig.), 76
 Camel, . . . 28 (fig.)
 Canada, agroforestry, . . . 32, 33 (figs.),
 34
 climate, . . . 115
 dairy products and margarine
 consumption, . . . 2 (figs.), 3
 milk production quotas, . . . 2
 tobacco production, . . . 135, 136 (fig.)
 Canker, apple, . . . 66
 Carbamate insecticides, . . . 69 (fig.), 104
 Carbaryl, . . . 104
 Carbofuran, . . . 78 (fig.)
 Carbon dioxide, crop growth and, . . . 114
 pest control, . . . 16
 Caribbean, tourism and agriculture, . . . 53,
 54, 55
 Caricom countries, agricultural
 exports, . . . 54
 Carp, grass, . . . 71 (fig.), 72 (figs.), 73 (fig.)
 Cassava, diseases, . . . 58
 Cattle, diseases, . . . 49, 50 (fig.), 51 (fig.),
 102, 103, 128
 draught, 27 (figs.), 28

fly control, . . . 30 (figs.), 31 (fig.), 32
growth promotion in, . . . 24 (fig.), 25
world numbers, . . . 105

Cattle production, forestry and, . . . 123
game parks and, . . . 53
tropics, . . . 20
USA, drought and, . . . 19

Cereals, breeding, . . . 45, 64, 65 (fig.)
harvesting and crop treatment, . . . 126, 127
micronutrient deficiencies, . . . 119 (fig.),
120
pig feeding and, . . . 108, 109 (fig.), 110

Cereal production, China, . . . 46
EEC policies, . . . 98, 99

Charcoal stalk rot, sorghum, . . . 134 (fig.)

Chosmodon apterus, . . . 79

Cheese consumption, . . . 2 (fig.), 3

Chick pea, . . . 119 (fig.)

Chile, foot-and-mouth disease, . . . 49

China, agricultural census, . . . 29
agricultural improvement, . . . 46 (fig.),
47 (figs.), 48 (fig.)
farm ownership and production, . . . 6
pig production, . . . 108, 109 (fig.)
rice production, . . . 4, 5
tobacco production, . . . 135

Chlorfenvinphos, . . . 104

Chlorine treatment, water, . . . 13

Chloromethurion, . . . 104

Chlorphacinone, . . . 75 (figs.)

Chlorpyrifos, . . . 78

Chrysomya bezziana, . . . 30

Cinchona sp., . . . 7

Citrus pest control, . . . 101, 123

Climate, crop growth and, . . . 4, 6 (figs.),
114 (figs.), 115 (fig.), 116

Clover, breeding, . . . 56 (fig.), 57, 129 (fig.),
130 (figs.), 131 (figs.)
phyllody, . . . 56 (fig.)

Clover rot, . . . 129 (fig.), 130

Cochliomyia hominivorax, . . . 30

Coconut, . . . 14 (fig.), 54, 119 (fig.)

Codling moth, . . . 66, 123

Coffee, diseases, . . . 15, 58

Colchicine, . . . 23

Common Agricultural Policy (CAP), . . . 9,
97, 98, 99

Computer use, land use planning, . . . 128
robot sheep shearing, . . . 106, 107

Conservation, CAP and, . . . 97
El Salvador, . . . 128
energy use in agriculture, . . . 111
game parks and tourism, . . . 53, 54 (fig.)
plant genetic material, . . . 55,
56 (fig.), 132 (fig.), 133
sheep production and, . . . 106

Consultative Group on International
Agricultural Research,
(CGIAR), . . . 1, 45

Contract services, harvesting and crop
treatment, . . . 126, 127

Copper, soil deficiency and
correction, . . . 119 (figs.), 120

Coppicing, . . . 32, 33 (fig.), 34 (fig.)

Copra, . . . 54

Corynebacterium insidiosum, . . . 131

Costa Rica, palm oil production, . . . 59

Costelytra zealandica, . . . 77

Cotton, breeding, . . . 121

Cotton production, China, . . . 47 (fig.)
fertiliser use, . . . 113 (fig.)
irrigation, . . . 13
USA, drought and, . . . 19

Coumachlor, . . . 75 (fig.)

Coumaphos, . . . 104

Coumarfuryl, . . . 75 (fig.)

Coumatetralyl, . . . 75 (figs.)

Cowdria ruminantium, . . . 103

Crambus spp., . . . 79

Crane fly, . . . 77 (figs.)

Crimidine, . . . 75 (fig.)

Crop drying, . . . 127

Crop storage, . . . 14, 15, 127 (fig.)

Ctenopharyngodon idella, . . . 71 (fig.)

Culicoides spp., . . . 30

Cutworm, . . . 77, 137

Cydia spp., . . . 100, 123

Cypermethrin, . . . 78, 104

Cytokinin, . . . 56

Cytoplasmic male sterility, . . . 62, 64, 65

d

Dacus dorsalis, . . . 17

Dairy production, China, . . . 46, 47
energy use, . . . 116, 117 (fig.), 118
research, . . . 110
surpluses and government policies, . . . 2, 3,
98, 99

Dairy products, consumption, . . . 2 (figs.)
marketing, . . . 2, 3

Dalapon, . . . 65

Day length, crop growth and, . . . 114,
115 (fig.)

Decamethrin, . . . 104

Deltamethrin, . . . 17

Denmark, dairy products and margarine
consumption, . . . 2 (figs.)

Dermestes sp., . . . 36

Deroceras reticulatum, . . . 77

Dichloropropene, . . . 136

2,2-dichloropropionic acid, . . . 65

Dicoumarol, . . . 76

Difenacoum, . . . 75 (figs.), 76

Diminazene, . . . 104

Dioxathion, . . . 104

Diphacinone, . . . 75 (figs.)

Direct drilling, . . . 4, 111

Diitylenchus dipsaci, . . . 130

DNA, . . . 23, 26, 27

Drainage, soil salinity and, . . . 47, 48 (fig.)

Draught animals,
improvement, . . . 27 (figs.),
28 (fig.), 29

Drought, plant breeding for resistance
to, . . . 22 (fig.), 62
1983, US agriculture and, . . . 19

Dutch Elm disease, . . . 123

e

Ear tag, insecticidal, . . . 30 (fig.), 31 (fig.),
32, 104

East Coast fever, . . . 102, 103, 104, 128

Ectoparasite control, . . . 17

Eelworm, stem, . . . 130

Egypt, aquatic weed control, . . . 71 (fig.), 72,
73 (fig.)

El Salvador, conservation, . . . 128

Elaeis spp., . . . 59, 60

Embryo transplantation, . . . 26

Empoasca dolichi Paoli, . . . 81

Encarsia formosa, . . . 18

Energy production, from plant
material, . . . 33 (fig.), 34 (fig.), 111

Energy use, agriculture, . . . 111, 116,

117 (figs.), 118 (fig.)
food processing, . . . 118

Environmental rehabilitation,
peatland, . . . 34 (fig.)

Enzootic Bovine Leucosis, . . . 123

Ephestia sp., . . . 100

Erosion, control, . . . 32, 34, 47 (fig.), 48, 70
reduced cultivation and, . . . 111

Erwinia amylovora, . . . 66

Erysiphe spp., . . . 69

Europe, foot-and-mouth disease, . . . 49,
50 (fig.), 51 (fig.)
micronutrient deficiencies, . . . 119
sheep production, . . . 105, 106
sugar beet production, . . . 70 (fig.)

European Economic Community (EEC), aid
for developing countries, . . . 1
Common Agricultural Policy (CAP), . . . 9,
97, 98, 99
dairy production, regulation of, . . . 2, 3, 98,
99
farm sizes, income and, . . . 9, 10 (figs.), 11
land use, . . . 118
milk quotas, . . . 98, 99
research, . . . 122 (figs.), 123
sheep production, . . . 105

Extension, . . . 1, 5, 26, 70

f

Farm Accountancy Data Network
(FADN), . . . 9, 10, 11

Farm incomes, . . . 19, 53 (fig.), 54, 55, 97, 99

Farm workers, mortality, . . . 124, 125 (fig.)

Fats, consumption, . . . 2 (fig.), 3, 124

Fenvalerate, . . . 78, 104

Fertiliser production, Pakistan, . . . 112, 113

Fertiliser use, application, . . . 127
developing countries, . . . 1
Pakistan, . . . 112 (figs.), 113 (fig.)
pasture, . . . 129, 130
rice production and, . . . 4, 6 (fig.)
solar energy and, . . . 117, 118 (fig.)
tobacco, . . . 135, 136
US agriculture, . . . 111

Festuca sp., . . . 21 (fig.), 23

Field bean, . . . 119 (fig.)

Fiji, tourism, . . . 54

Filters, irrigation systems and use
of, . . . 12 (fig.), 13 (fig.)

Finland, agroforestry, . . . 33, 34 (fig.)

Fire blight, . . . 66

Fisheries, grass carp, . . . 71 (fig.), 72,
73 (fig.)
irrigation systems and, . . . 71, 72, 73 (fig.)
preservation of catch, . . . 35 (fig.),
36 (figs.)
tourism and, . . . 53, 54, 55
world production, . . . 35

Fish meal, . . . 35, 36

Fluoroacetamide ('1081'), . . . 75 (fig.)

Fly control, . . . 30

Fonofos, . . . 78 (fig.)

Food, human health and, . . . 124, 125

Food and Agriculture Organisation
(FAO), . . . 1, 14, 15, 29, 70, 112,
113, 128, 132, 133

Food processing, animal feedstuffs from
wastes, . . . 110
dairy products, . . . 3
energy use, . . . 116, 117 (figs.), 118
fish, . . . 35 (fig.), 36 (fig.)
palm oil, . . . 59
research, . . . 110
sugar beet, . . . 69 (fig.), 70
winged beans, . . . 80

Foot-and-mouth disease, . . . 29, 49 (fig.),
50 (fig.), 51 (fig.), 74
Forestry, biological pest control, . . . 101, 102
China, . . . 47 (fig.), 48
livestock production and, . . . 123
tree diseases, . . . 123
willow, . . . 32, 33 (figs.), 34 (figs.)
France, dairy products and margarine
consumption, . . . 2 (figs.)
farm incomes, . . . 10
foot-and-mouth disease, . . . 49, 50,
51 (fig.)
milk production quotas, . . . 98
sunflower breeding, . . . 61, 62 (figs.),
63 (figs.)
Frit fly, . . . 77, 78, 79
Fruit fly, . . . 17
Fruit production, irrigation, . . . 12 (fig.), 13
Fuel production, bean plant
material, . . . 33 (fig.), 127, 128
Fungicide use, grassland, . . . 78, 79 (fig.)
sugar beet, . . . 69, 70

g

Galactosides, winged bean, . . . 80
Gambia, draught animals, . . . 29
Game parks, . . . 53, 54 (fig.)
Gamma irradiation, plant breeding
and, . . . 62
Gene transfer, . . . 26, 57, 104, 107
Genetic conservation, cereals, . . . 45
forage crops, . . . 55, 56 (figs.)
rubber, . . . 7, 8 (figs.)
sorghum, . . . 132 (fig.), 133
soya bean, . . . 26
vegetables, . . . 45
Genetic manipulation, plant breeding
and, . . . 23, 45, 55
Geomys spp., . . . 74
Germany, dairy products and margarine
consumption, . . . 2 (figs.)
farm incomes, . . . 10
foot-and-mouth disease, . . . 50, 51 (fig.)
milk production quotas, . . . 98
Gibberellic acid, cereal breeding and use
of, . . . 65
Glossina spp., . . . 30
Glycosides, cyanogenic, . . . 80
Goat, diseases, . . . 30, 103
world numbers, . . . 105
Gopher, . . . 74
Grape irrigation, . . . 13
Grape must, research on use of, . . . 123
Grass, beef production on, . . . 117 (fig.),
118 (fig.)
breeding, . . . 21 (fig.), 22 (figs.), 23, 55,
56 (figs.), 57
Grass carp, . . . 71 (fig.), 72 (figs.), 73 (fig.)
Grass grub, . . . 77, 78, 79
Grass silage, . . . 108, 109 (figs.), 110 (fig.)
Grassland, clover and improvement
of, . . . 131 (fig.)
fertiliser use, . . . 129
land suitable for, Europe, . . . 123
pest control, . . . 77, 78 (figs.), 79 (figs.)
research, . . . 110
UK, . . . 21
Ground nut, micronutrient
deficiency, . . . 119 (fig.), 120 (fig.)
Ground nut rust, . . . 58
Growth hormone, . . . 24, 25 (figs.), 26
Growth regulators, sugar beet, . . . 68
tobacco, . . . 136
Gulf Stream, climate and crop
growth, . . . 115

h

Haematobia irritans, . . . 31
Halofuginone, . . . 104
Harvesting, apples, . . . 66, 67 (fig.)
industrial approach to, . . . 126 (fig.)
sugar beet, . . . 69 (fig.)
tobacco, . . . 137 (fig.)
Hawaii, tourism and agriculture, . . . 53, 54
Heartwater, . . . 103, 104
Helianthus spp., . . . 61, 62
Heliothis spp., . . . 81, 137
Helminthosporium sp., . . . 62
Hepatitis, . . . 74
Herbicide use, application, . . . 15 (fig.),
16 (fig.), 17 (fig.), 18 (fig.)
clover, . . . 131
energy savings, . . . 111
rice, . . . 4
tobacco, . . . 131, 136
Herpes, . . . 123
Heteronychus arator, . . . 79
Heterorhabditis sp., . . . 79
Hevea sp., . . . 7 (fig.), 8 (fig.)
Hormones, growth promotion
and, . . . 24 (figs.), 25 (figs.), 26
Horse, . . . 28
Horticultural research, international
handbook of, . . . 116
House fly, . . . 30
Human health, agriculture and, . . . 124,
125 (figs.)
Humidity, crop growth and, . . . 114,
115
Hyalomma sp., . . . 102
Hydatidosis, . . . 125
Hydrotaea irritans, . . . 30

i

Imidocarb, . . . 104
Immunisation, somatostatis, . . . 24 (fig.), 25,
26
India, apple production, . . . 66
cattle population, . . . 51
draught animals, . . . 28
foot-and-mouth disease, . . . 49 (fig.), 51
micronutrient deficiencies, . . . 119, 120
rural development, . . . 5
tobacco production, . . . 135, 136 (fig.)
wheat varieties, . . . 1
Indonesia, apple production, . . . 67
palm oil production, . . . 59
tobacco production, . . . 136 (fig.)
Infectious bovine rhinotracheitis, . . . 123
Insect pests, pheromone use for control
of, . . . 100 (figs.), 101 (figs.), 102
population monitoring, . . . 100 (figs.)
Insecticide use, apples, . . . 66
grassland, . . . 77, 78 (figs.), 79 (fig.)
non liquid applications, . . . 16, 17, 18 (fig.)
stored fish, . . . 36
sugar beet, . . . 69 (fig.)
tick control, . . . 103, 104 (fig.)
Insulin, . . . 25 (figs.)
Insurance, crop, USA, . . . 19
Intercropping, sorghum, . . . 134
Total Harvest and, . . . 127
International agencies, agricultural aid, . . . 1
International Crops Research Institute for
the Semi-Arid Tropics

(ICRISAT), . . . 132, 133, 134
International Maize and Wheat Improvement
Centre (CIMMYT), . . . 45
International Plant Protection
Convention, . . . 14
International Rice Research Institute
(IRRI), . . . 4, 5, 45, 121
International Rubber Research and
Development Board (IRRDB), . . . 8
Ips typographus, . . . 101
Ireland, agroforestry, . . . 34
dairy products and margarine
consumption, . . . 2 (figs.)
farm incomes, . . . 10
Irradiation, pest control, stored fish, . . . 36
Irrigation, Australia, . . . 11
China, . . . 46 (fig.), 48 (fig.)
drip, . . . 11, 12 (figs.), 13 (fig.)
energy saving, USA, . . . 111
human health and, . . . 125
Pakistan, . . . 112, 113
pump, . . . 128
rice production and, . . . 6 (fig.)
tobacco, . . . 136
weed control in, . . . 71 (fig.), 72 (fig.),
73 (fig.)
Iron, removal from irrigation water, . . . 13
soil deficiency and
correction, . . . 119 (figs.), 120 (fig.)
Italy, farm incomes, . . . 10
Ivory Coast, palm oil production, . . . 59, 60
rubber improvement, . . . 8 (fig.)
winged bean, . . . 81
Ixodidae, . . . 102

j

Jamaica, banana exports, . . . 53 (fig.)
erosion control, . . . 70
tourism and agriculture, . . . 53 (fig.),
54, 55

k

Ked, sheep, . . . 30
Kenya, tourism and agriculture, . . . 53, 54
Keratoconjunctivitis, cattle, . . . 30, 31, 32
Krill, . . . 35

l

Land prices, Europe, . . . 9
Land resources, mapping, Europe, . . . 123
Land use, Pakistan, . . . 112
planning, . . . 128
rural development and, EEC, . . . 122, 123
tourism and, in developing
countries, . . . 54
Latitude, crop growth and, . . . 114 (fig.),
115, 116

Leaf roller, . . . 101
 Leatherjacket, . . . 77 (figs.), 78
 Lectins, winged bean, . . . 80
 Legumes, faba bean, . . . 123
 forage, improvement, . . . 55, 56 (figs.), 57,
 129 (figs.), 130 (figs.), 131 (figs.)
 micronutrient deficiency
 and, . . . 119 (fig.), 120, 121 (fig.)
 nitrogen fixation, . . . 55, 80, 81 (fig.), 120,
 121 (fig.)
 winged bean, . . . 80, 81 (figs.)
 Light, crop growth and, . . . 114, 115 (fig.)
 Lindane, . . . 104
Listrionotus bonariensis, . . . 78
 Livestock production, Africa, . . . 58
 energy use, . . . 116, 117 (figs.), 118
 growth promotion, . . . 24 (figs.), 25 (fig.),
 26
 intensive, . . . 122, 123
 pig, . . . 108, 109 (figs.), 110 (fig.)
 sheep, . . . 22 (fig.), 105 (fig.), 106 (fig.),
 107 (fig.)
 tropics, . . . 20
 USA drought and, . . . 19
 Locust, . . . 1, 14, 16, 17
Lolium spp., . . . 21 (fig.), 22 (figs.), 23, 56, 78
 Lucerne, improvement, . . . 129 (fig.), 130,
 131
Lucilia spp., . . . 30

m

Magnesium content, plant dry
 matter, . . . 119 (fig.)
 Maize,
 evapotranspiration, . . . 63 (fig.)
 fuel production from, . . . 111
 hybrid, . . . 64
 micronutrient deficiency, . . . 119 (fig.),
 121
 Maize production, energy use, . . . 118
 Total Harvest system, . . . 126
 USA drought and, . . . 19
 Malaria, . . . 71, 125
 Malathion, . . . 17
 Malawi, East Coast Fever, . . . 128
 Malaysia, palm oil production, . . . 59,
 60 (fig.), 61
 rubber improvement, . . . 8 (fig.)
Malus sp., . . . 66, 68
 Manganese, soil deficiency and
 correction, . . . 119 (figs.), 120 (fig.)
 Margarine, . . . 2 (fig.), 3
 Marketing, dairy products, . . . 2, 3
 fertiliser, . . . 113
 tropical agriculture and, . . . 20, 58
 Mastitis, cattle, . . . 30, 32
 Mechanisation, agriculture, China, . . . 47
 agroforestry, . . . 33
 animal feeding, . . . 106, 107, 108
 harvesting, . . . 67 (fig.), 69 (fig.),
 126 (figs.), 137 (fig.)
 irrigation pump, . . . 128
 rice production, . . . 4
Medicago sativa, . . . 129
 Mediterranean agriculture
 improvement, . . . 122, 123
Meloidogyne spp., . . . 81, 136
Melophagus ovinus, . . . 30
 Methiocarb, . . . 16
 Methyl eugenol, . . . 17
Microcyclops ulei, . . . 7
 Microencapsulation, . . . 31, 101
 Micronutrient requirements, tobacco, . . . 136
 Micropropagation, . . . 56 (figs.)
Microtus spp., . . . 74

Midge, . . . 30
 Mildew, apple, . . . 61, 62 (fig.), 66, 69, 81
 Milk consumption, . . . 2 (fig.), 3, 124
 Milk marketing, . . . 2, 3
 Milk production, China, . . . 46, 47
 CAP and, . . . 98, 99
 sheep, . . . 105 (fig.), 107 (figs.)
 Mineral supplements, growth promotion
 and, . . . 24
 Mite, red spider, . . . 66
 Molluscicide use, . . . 78 (fig.)
 Molybdenum, soil deficiency and
 correction, . . . 119 (figs.), 120, 121 (fig.)
 Mosquito, . . . 16, 17
 Mouse, . . . 26, 74
Mus musculus, . . . 74
Musca spp., . . . 30
 Muka, animal feedstuff from willow, . . . 34
 Mutagenic treatments, plant breeding, . . . 62,
 68
Myzus persicae, . . . 137

n

Nectria galligena, . . . 66
 Neem seed oil, . . . 4
 Nematodes, . . . 16, 78, 79, 136
Neoplectana spp., . . . 79
 Netherlands, Aujeszky's disease, . . . 52
 dairy products and margarine
 consumption, . . . 2 (figs.), 3
 farm incomes, . . . 10, 11
 foot-and-mouth disease, . . . 49, 50,
 51 (fig.)
 milk production quotas, . . . 98
 plant breeding, . . . 45
 New Zealand, climate, . . . 115
 micronutrient deficiencies, . . . 119, 121
 sheep production, . . . 106
Nicotiana spp., . . . 135, 137
 Nigeria, palm oil production, . . . 59, 70
 Nitrogen fixation, . . . 55, 80, 81 (fig.), 120,
 121 (fig.)
 Nitrogen requirements, sunflower, . . . 62
 tobacco, . . . 135
 Norbromide, . . . 75 (fig.)
 Norway, dairy products and margarine
 consumption, . . . 2 (figs.)
 Nutrition, human health and, . . . 124, 125

o

Oats, micronutrient deficiency, . . . 119 (fig.)
 Oil content, winged bean, . . . 80
 Oil palm, breeding, . . . 59, 60 (fig.), 61 (fig.)
 Olive, pest management, . . . 14
 Omethoate, . . . 78
 Onchocerciasis, . . . 17
 OPEC Fund for International
 Development, . . . 1
 Organophosphorus insecticides, . . . 17,
 69 (fig.), 104
Oryctolagus cuniculus, . . . 74
Oscinella spp., . . . 77
 Oxamyl, . . . 78
Oxyza sativa, . . . 4

p

Pakistan, apple production, . . . 66
 fertiliser use, . . . 112 (figs.), 113 (fig.)
 land use, . . . 112
 wheat varieties, . . . 1
 Palm, coconut, . . . 14 (fig.), 54, 119 (fig.)
 Palm, oil, . . . 59, 60 (fig.), 61 (fig.)
 Palm oil, processing, . . . 70
 world production, . . . 59
 Palm rhinoceros beetle, . . . 14
Panicum maximum, . . . 57
Panonychus ulmi, . . . 66
 Papua New Guinea, . . . 59, 81 (fig.)
 Parvaquone, . . . 104
 Pasture, improvement, . . . 129 (fig.),
 131 (fig.)
 micronutrient treatments, . . . 120, 121
Pawlonia spp., . . . 48
 Payment-in-kind (PIK) programme,
 USA, . . . 19
 Pea moth, . . . 100
 Peat land, reclamation, . . . 33, 34 (fig.)
Pectinophora gossypiella, . . . 102
Pennisetum spp., . . . 57
Peronospora tabacina, . . . 137
 Pest control, flies on livestock, . . . 30 (figs.),
 31 (figs.), 32, 104 (fig.)
 locusts, . . . 1, 16
 nematodes, . . . 16, 78, 79, 136
 pheromones and, . . . 17, 66, 100 (figs.),
 101 (fig.), 102
 rodents, . . . 74, 75 (figs.), 76
 ticks, . . . 103, 104 (fig.)
 Pest management, integrated, . . . 4, 14,
 15 (fig.), 58, 122, 123
 Pesticide registration, . . . 15
 Pesticide use, apples, . . . 66
 code of conduct, . . . 15
 dried fish and, . . . 36
 energy saving, . . . 111
 formulation, . . . 16 (fig.), 17 (fig.),
 18 (figs.), 30 (fig.)
 grassland, . . . 77, 78 (figs.), 79 (figs.)
 human health and, . . . 125
 non liquid application, . . . 16 (fig.),
 17 (fig.), 18 (figs.)
 safety, . . . 16
 stored grain, . . . 16, 70
 sugar beet, . . . 69, 70
 tobacco, . . . 137
 Pheromones, insect pest control and use
 of, . . . 17, 66, 100 (figs.), 101 (figs.), 102
 Philippines, palm oil production, . . . 59
 rice production, . . . 1, 4
 tobacco production, . . . 136 (fig.)
 Phorate, . . . 78 (fig.)
 Phylloidy, clover, . . . 56 (fig.)
 Phytomenadione, . . . 76
Phytophthora spp., . . . 66
 Pig, Aujeszky's disease in, . . . 52
 growth promotion in, . . . 24, 25, 26
 nutrition, . . . 108, 109 (figs.), 110 (figs.)
 Pig production, energy use, . . . 116
 Pigeon pea, micronutrient
 deficiency, . . . 119 (fig.)
 Pindone, . . . 75 (fig.)
 Pineapple, . . . 16
 Pink eye, cattle, . . . 31
 Pirimiphos methyl, . . . 36
 Pival, . . . 75 (fig.)
 Plant breeding, apple, . . . 68
 cereals, . . . 64, 65 (fig.)
 climate and, . . . 115
 clover, . . . 129, 130 (figs.), 131 (figs.)
 coconut palm, . . . 14 (fig.)
 financial inputs, . . . 45
 grasses, . . . 21 (fig.), 22 (figs.), 23, 55,
 56 (figs.), 57
 legal protection for new varieties, . . . 45
 legumes, . . . 55, 56 (figs.), 57, 81, 123, 129,

130 (figs.), 131 (figs.)
 micronutrient susceptible crops
 and, . . . 120, 121
 oil palm, . . . 59, 60 (fig.), 61 (fig.)
 rice, . . . 4, 5 (fig.)
 rubber, . . . 7, 8 (fig.)
 sorghum, . . . 132 (fig.), 133 (fig.),
 134 (fig.)
 sugar beet, . . . 70
 sunflower, . . . 61, 62 (figs.), 63 (figs.)
 sweet potato, . . . 26
 tobacco, . . . 123, 137
 winged bean, . . . 81
 Plant growth substances, . . . 65, 68, 136
Plodia sp., . . . 100
Poa pratensis, . . . 57
Podosphaera leucotricha, . . . 66
 Pollination, cereal breeding and, . . . 64
 sorghum, . . . 133, 134 (fig.)
 sunflower, . . . 62
Polymyxa betae, . . . 69
 Poplar, . . . 48
Populus spp., . . . 48
 Potato, micronutrient
 deficiency, . . . 119 (fig.), 120 (fig.)
 pig feeding and, . . . 108, 109 (fig.)
 slug control on, . . . 16
 Potato production, energy use, . . . 118
 Poultry, ectoparasite control, . . . 17
 tick borne diseases, . . . 103
 Poultry production, animal welfare, . . . 123
 energy use, . . . 116, 118
Prays citri, . . . 101
 Propagation, vegetative, . . . 33, 56 (fig.), 80
 Protease inhibitors, winged bean, . . . 80
 Protein content, willow foliage, . . . 34
 winged bean, . . . 80
 Protoplast fusion, . . . 56 (fig.), 57
 Pruning, apple trees, . . . 66
Pseudocercospora psophocarpi, . . . 81
Pseudomonas solanacearum, . . . 81
Psophocarpus tetragonolobus, . . . 80,
 81 (figs.)
Pueraria phaseoloides, . . . 121 (fig.)
 Puerto Rico, sugar production, . . . 54
 PVC, insecticidal ear tags, . . . 30 (fig.)
 irrigation tubing, . . . 11
 Pyrethroid insecticides, . . . 16, 30 (fig.),
 36, 104
 Pymimyl, . . . 75 (fig.)

R

Rabbit, . . . 74
 Raffinose, . . . 80
Ramularia beticola, . . . 69
 Rape, pig feed, . . . 109 (fig.)
 Rat, . . . 74 (fig.), 76 (fig.)
Rattus spp., . . . 74 (fig.), 76 (fig.)
 Red clover necrotic mosaic
 virus, . . . 130 (fig.), 131 (fig.)
 Reduced cultivation, fertiliser use, . . . 111
 Rhinotracheitis, infectious bovine, . . . 123
Rhipicephalus appendiculatus, . . . 102,
 103 (figs.), 104
Rhizobium, . . . 55, 57, 80, 131
Rhizoctonia solani, . . . 81
 Rhizomania, . . . 69
 Rice, improvement, . . . 4, 5 (figs.), 6 (figs.)
 micronutrient deficiency and, . . . 4,
 119 (fig.), 121
 new varieties, . . . 1, 4, 5 (fig.)
 pest management, . . . 14, 15
 weed control, . . . 4, 18 (fig.)

Rice production, fertiliser use, . . . 4, 6 (fig.),
 113 (fig.)
 social and economic factors affecting, . . . 5,
 6 (fig.)
 Rinderpest, . . . 29
Robinia pseudoacacia, . . . 48
 Rodents, control, . . . 70, 74, 75 (figs.),
 76 (figs.)
 diseases transmitted by, . . . 74
 losses due to, . . . 74, 76 (fig.)
 Romania, sheep production, . . . 105 (fig.),
 107
 Ronnel, . . . 104
 Rubber, improvement, . . . 7 (fig.), 8 (fig.)
 Rural development, China, . . . 46 (fig.),
 47 (figs.), 48 (fig.)
 EEC, . . . 122
 Ryegrass, breeding, . . . 21 (fig.), 22 (figs.),
 23, 55, 56 (fig.), 57
 clover and, . . . 131 (fig.)

S

Salinity, soil, . . . 11, 47, 48 (fig.)
Salix spp., . . . 32, 33 (figs.), 34 (figs.)
 Salmonella diseases, . . . 74, 125
 Scab, apple, . . . 66
Schistocerca gregaria, . . . 14
 Schistosomiasis, . . . 17, 71, 73, 125
 Scilliroside, . . . 75 (fig.)
Sciurus spp., . . . 74
Sclerotinia sclerotiorum, . . . 62 (fig.),
 63 (fig.)
Sclerotinia trifoliorum, . . . 129 (fig.), 130
 Screw-worm, . . . 30
 Seed dressings, . . . 17, 78, 79 (fig.), 120, 121
 Seed production, cereal hybrids, . . . 64, 65
 grasses, . . . 23
 legumes, . . . 129 (fig.), 130
 sugar beet, . . . 68
 Sex hormones, growth promotion
 and, . . . 24 (fig.), 25 (fig.)
 Seychelles, tourism and agriculture, . . . 54, 55
 Sheep, breeding, . . . 106 (fig.)
 diseases, . . . 30, 103
 ectoparasites, . . . 30, 31 (fig.), 32, 103
 growth promotion in, . . . 24 (fig.), 25
 Sheep production, . . . 105 (fig.), 106 (fig.),
 107 (figs.)
 energy use, . . . 118
 forestry and, . . . 123
 Shelterbelts, willows, . . . 32
 Shrimp fishing, . . . 35, 36
 Sierra Leone, . . . 29
 Silage, grass, . . . 21, 22 (fig.), 23, 108,
 109 (figs.), 110 (fig.)
Sitotroga sp., . . . 100
 Slug, . . . 16, 77, 78 (fig.)
 Sodium fluoroacetate ('1080'), . . . 75 (fig.)
 Sodium hydroxide, straw
 treatment, . . . 127 (fig.), 128 (fig.)
 Soil, pesticide application in, . . . 16
 salinity, . . . 11, 47, 48 (fig.)
 Soil conditions, crop growth and, . . . 114, 115
 micronutrients, . . . 113, 119 (figs.),
 120 (figs.), 121 (figs.)
 Pakistan, . . . 112, 113
 rice cultivation and, . . . 4, 6 (fig.)
 tobacco cultivation and, . . . 135
 winged bean cultivation and, . . . 81
 Soil erosion, China, . . . 47 (fig.), 48
 Europe, . . . 122 (figs.), 123
 Jamaica, . . . 70
 reduced cultivation and, . . . 111
Solanaceae, . . . 135

Solar energy, . . . 111, 116, 117 (fig.),
 118 (fig.)
 Solomon Islands, palm oil production, . . . 59
 Somatic hybridisation, tissue culture
 and, . . . 56, 57
 Somatomedins, . . . 25 (figs.)
 Somatostatin, action of growth hormone
 and, . . . 24 (fig.), 25 (fig.), 26
 Sorghum, breeding, . . . 64, 132 (fig.),
 133 (fig.), 134 (figs.)
 micronutrient deficiency, . . . 119 (fig.),
 121
 USA drought and production of, . . . 19
 world production, . . . 132
Sorghum bicolor, . . . 132
 South America, foot-and-mouth
 disease, . . . 49, 51
 palm oil production, . . . 59
 rubber seed collecting, . . . 7, 8 (fig.)
 South American Leaf Blight, . . . 7, 8
 South Korea, tobacco
 production, . . . 136 (fig.)
 Soya bean, genetic conservation, . . . 26
 micronutrient deficiency
 and, . . . 119 (fig.), 121
 Soya bean production, China, . . . 46
 USA drought and, . . . 19
Spermophilus spp., . . . 74
Spodoptera exempta, . . . 100
 Spotted fever, . . . 74
 Spraying, micronutrients, . . . 119, 120, 121
 pesticides, . . . 16, 17, 79 (fig.)
 pheromones, . . . 101, 102
 Spruce bark beetle, . . . 101
 Squirrels, . . . 74
 Sri Lanka, land use planning, . . . 128
 Stachyose, . . . 80
 Steroids, growth promotion
 and, . . . 24 (fig.), 25 (fig.)
Stomoxys calcitrans, . . . 31
 Straw, industrial uses, . . . 127, 128 (fig.)
Striga sp., . . . 134 (fig.)
 Strychnine, . . . 75 (fig.)
Stylosanthes sp., . . . 104
 Sugar beet, micronutrient
 deficiency, . . . 119 (fig.)
 weed control, . . . 17 (fig.)
 Sugar beet production, energy use, . . . 118
 successful cropping, . . . 68, 69 (figs.),
 70 (fig.)
 world, . . . 70 (fig.)
 Sugar cane, drip irrigation, . . . 13
 Sugar cane production, developing
 countries, . . . 53, 54, 55
 energy use, . . . 118
 fertiliser use, . . . 113 (fig.)
 Sunflower, breeding, . . . 61, 62 (figs.),
 63 (figs.)
 Swede, pig feed, . . . 109 (fig.)
 Sweden, agroforestry, . . . 34 (fig.)
 dairy products and margarine
 consumption, . . . 2 (figs.)
 Sweet potato, breeding, . . . 26
 Swine fever, . . . 52, 123
 Swine vesicular disease, . . . 52
 Switzerland, milk production quotas, . . . 2
Synchytrium psophocarpi, . . . 81

T

Tahiti, agriculture and tourism, . . . 54, 55
 Teeth, false in sheep, . . . 106, 107
 Temperature, crop growth and, . . . 114,
 115 (fig.)

Tetracyclines, . . . 104
 Thailand, palm oil production, . . . 59
 tobacco production, . . . 136 (fig.)
 Thallium sulphate, . . . 75 (fig.)
Theileria spp, . . . 102
 Theileriosis, . . . 102, 103, 104
Thomomys spp, . . . 74
Thrips tabaci, . . . 137
 Thyroid stimulating hormone, . . . 25 (fig.)
 Thyroxine, . . . 25 (fig.)
 Tick control, . . . 102, 103 (figs.), 104 (fig.),
 128
Tipula paludosa, . . . 77 (figs.)
 Tissue culture, . . . 55, 56 (figs.), 57, 60
 Tobacco, world production, . . . 135,
 136 (fig.)
 Tobacco production, improvement, . . . 123,
 137
 micronutrients and, . . . 120 (fig.)
 successful cropping, . . . 135 (fig.),
 136 (figs.), 137 (figs.)
 'Total Harvest', system, . . . 126 (figs.),
 127 (fig.), 128 (fig.)
 Tourism, agriculture and, in developing
 countries, . . . 53 (figs.), 54 (figs.)
 Toxaphene, . . . 104
 Tree planting programme,
 China, . . . 47 (fig.), 48
 Trenbalone, . . . 24
Trifolium spp, . . . 57, 129
Triticum timopheeri, . . . 64
Trogoderma sp, . . . 100
 Trypanosomiasis, . . . 29, 30, 125
 Trypsin inhibitor, winged bean, . . . 80
 Tsetse, . . . 17, 30
 Tuberculosis, . . . 125
 Tunisia, tourism and agriculture, . . . 54
 Turkey, sheep production, . . . 107 (figs.)
 Typhus, . . . 74

U

UK, agriculture and human health, . . . 124,
 125 (figs.)
 Aujeszky's disease, . . . 52
 dairy products and margarine
 consumption, . . . 2 (figs.)
 farm incomes, . . . 10
 foot-and-mouth disease, . . . 49, 50
 grassland, . . . 21
 milk production quotas, . . . 98
 mortality statistics, . . . 124, 125 (figs.)
 plant breeding, . . . 45
 sheep meat production, . . . 105
 United Nations, agricultural aid
 agencies, . . . 1
 United Nations Development Programme
 (UNDP), . . . 1, 70, 128
 United Nations World Food
 Programme, . . . 46 (fig.), 47, 48
 USA, aid to developing countries, . . . 1
 dairy products and margarine
 consumption, . . . 2 (figs.), 3
 1983 drought and agricultural
 production, . . . 19
 energy consumption, agriculture, . . . 111
 farm incomes, . . . 9, 10, 19
 government spending on
 agriculture, . . . 19
 micronutrient deficiencies, . . . 119, 120
 milk production surpluses, . . . 2, 3
 plant breeding, . . . 45
 tobacco production, . . . 135, 136 (fig.)
 USSR, sheep production, . . . 106

V

Vaccination, Aujeszky's disease, . . . 52
 East Coast Fever, . . . 128
 foot-and-mouth disease, . . . 49 (fig.),
 50 (fig.), 51 (fig.)
 tick borne diseases, . . . 103, 128
 Vanilla, . . . 54
 Vegetable production, climate and, . . . 116
 tourism and, in developing
 countries, . . . 53, 55
 Vegetables, pig feed, . . . 108, 109 (fig.)
 plant breeding, . . . 45
Venturia inaequalis, . . . 66
 Verbascose, . . . 80
Verticillium albo-atrum, . . . 130 (fig.), 131
Vicia faba, . . . 123
 Virus yellows, sugar beet, . . . 69 (fig.)
 Vole, . . . 74

W

Wage rates, Barbados, . . . 53 (fig.)
 Warfarin, . . . 75 (figs.), 76
 Water requirements, crop growth
 and, . . . 114, 115 (fig.), 136
 Water resources, pumping, . . . 28 (fig.)
 rice production and, . . . 4, 6 (figs.)
 Water treatment, irrigation and, . . . 13 (fig.)
 Watermelon, . . . 17
 Weed control, . . . 15 (fig.)
 aquatic, . . . 71 (fig.), 72 (figs.), 73 (fig.)
 rice, . . . 4
 sugar beet, . . . 68
 tobacco, . . . 136
 Weevil, stem, . . . 78
 Weil's disease, . . . 74
 Wheat, breeding, . . . 1, 15, 64, 65 (fig.)
 micronutrient deficiency, . . . 119 (fig.),
 120
 Wheat production, China, . . . 46
 energy use, . . . 116, 117 (fig.), 118
 fertiliser use, . . . 113 (fig.)
 USA drought and, . . . 19
 Wild life, game parks, . . . 53, 54 (fig.)
 Wild oat, control, . . . 17
 Willow, . . . 32, 33 (figs.), 34 (figs.), 48
 Wind, crop growth and, . . . 115 (fig.)
 energy from, . . . 111
 Winged bean, evaluation of, . . . 80, 81 (figs.)
 Wireworm, . . . 77
Wiseana spp, . . . 79
 Wool production, . . . 105 (fig.), 106 (fig.),
 107 (fig.)
 World Bank, agricultural aid, . . . 1
 World Food Programme, . . . 46 (fig.), 47, 48

Y

Yields, apples, . . . 66, 68
 fish, . . . 71, 72, 73 (fig.)
 palm oil, . . . 60
 rice, . . . 4, 5, 6 (fig.)

rubber, . . . 7
 sorghum, . . . 132, 133, 134
 sugar beet, . . . 68
 sunflower oil, . . . 62 (fig.)
 willow, . . . 33 (figs.)
 winged bean, . . . 81

Z

Zaire, palm oil production, . . . 59
 Zeranol, . . . 24
 Zimbabwe, boron deficiency, . . . 120 (fig.)
 tobacco production, . . . 120 (fig.), 135,
 136 (fig.)
 Zinc, soil deficiency and correction, . . . 113,
 119 (figs.), 121
 Zinc phosphide, . . . 75 (fig.)

